

St. Helier's (Jersey).—Four streets, King-street, Queen-street, Hackett-place, and Breasford-street, erected four or five years since, according to the *Jersey Times*, are still unpaved, owing to a dispute, or difference of opinion as to whether the States or the Vingtaines were liable to pay the cost. A meeting of house proprietors and other inhabitants of the town has been held for the purpose of endeavouring to have the matter settled, and the streets paved.

THE WINTER EXHIBITION OF SKETCHES AND DRAWINGS.

THE Winter Exhibition may now be considered as established, and the public are indebted to the founders of it for a pleasant resort at a period of the year when the other galleries are closed, and moreover, for showing our artists in a different capacity from that in which they are usually seen. There was a full room at the private view last Saturday, and though the weather was bad for seeing pictures, twenty-three works were sold. The present collection consists of 290 drawings, and includes specimens by Armitage, Bennett, Branwhite, Cattermole, Callow, Clint, Miss Mary Ann Cole, E. W. Cooke, Davidson, Duncan, Elmore, Copley Fielding, Glass, Haag, Hannah, Hart, Hunt, Jutsum, Lee, Koell, Linnell, John Martin, Pen'ey, Lake Price, G. Stanfield, P. Taylor, the late Mr. Turner, Uwins, Vacher, Williams, and many others.

Elmore's sketch for his picture of "Hotspur and the Pop" (17) (the top too energetic); Linnell's "Forest Skirts" (53), Davidson's "Corn Field" (74), Middleton's "Berkhurst Park" (137), John Wilson's "Mount Orgueil Castle" (154), Vacher's "Interior" (195), Pen'ey's "View of Sidon" (228), Jutsum's "Fishing Huts" (263), Glass's "Finette" (276), have marks against them in our catalogue. No. 110, by the last named artist, is interesting as showing the present bad condition of the celebrated painting in the refectory at the Convent of Delle Grazie, Milan.

THE ROMAN BATHS DISCOVERED AT SAINTES, ON THE CHARENTE.

At a meeting of the *Société libre des Beaux Arts*, Paris, on the 16th of November, M. Bourla gave a description of Roman Baths discovered in 1851 and 1852, within the site of the ancient *Mediolanum*. These baths included an *atrium*, or entrance vestibule, paved with small red bricks; an *apodyterium*, where the bathers undressed; and a *tepidarium*. The latter was paved with black and white marble in geometrical figures. On the left side there was a fourth apartment, the *lacoonium*, particularly interesting because of the means of heating which it exhibited. A fifth apartment, the *frigidarium* (the only one which has been preserved), contains a bath large enough for several persons to bathe at once. The walls were decorated with paintings, in parts still fresh and perfect.

SUPER-WAYS FOR LONDON.

HAVING read an article in the last number of the *Builder*, headed "Calculations for the City Railway Terminus," I beg to trouble you with a plan I conceived some time ago of a railroad conveyance from the Bank (or more eastward, if desired) to the top of Oxford-street, which idea may not be impracticable. Instead of a railroad on the ground, I beg to propose one composed of solid iron, to pass over the houses, to be supported by iron pillars at proper distances, wide enough apart where they cross the streets, to allow omnibuses, &c. to pass through, and placed against the sides of houses, to seem to obstruct the street-openings as little as possible, where circumstances allow them so to stand.

In descending or ascending an inclined plane on the ground it would only be necessary to lengthen the supporters, while at certain distances flights of steps might be put up for passengers to ascend; and by this plan a rapid conveyance might be obtained, enabling the

public to be conveyed from one end of London to the other in ten minutes or a quarter of an hour.

Whether my plan would be more or less expensive than purchasing houses to pull down, remains for some one who has more time and facility in calculating the outlay required for such an undertaking than myself to determine.

H. WILSON.

* * * A similar suggestion was made some time ago in our pages.

THE VENTILATION QUESTION.

MANY thanks to "J. E. D." for calling attention to the aqueous vapour, which certainly should not have been omitted in my consideration of the breath. Its steam, being by far the lightest ingredient, the increase thereof, compared with that in fresh air, will go far to counteract the effect of the increase of carbonic acid, and make the breath retain its levity the longer, so that the temperature at which self-ventilation ceases will, on this account, be a few degrees higher than I had put it, perhaps as high as 90°.

Further than this I see nothing in his last letter calling for public comment. As for such questions as how much he knew, and how much I did not know about gaseous diffusion, and how much I thought he did not know, and how loose my expressions were, and what a conceited fellow I am, and how injured he is, and how wickedly I tried to misrepresent his plan, and how much we are indebted to him for it;—I really cannot ask your time, much less your readers', to matters so purely private and foreign to the subjects in hand.

My original position, the necessity—moral necessity—of an upwardly draining ceiling, seems, as far as I can see, unassailed.

On the second and far less important question of the desirableness of descending ducts from the space over such a ceiling, the purpose of my interference is answered: your readers have seen my reasons against, and his reasons for them; and I have washed my hands of any failure that may arise from the carrying out of my plans with this addition.

Any attentive reader will detect the fallacies of the supposed contradictions in my argument. I did not suppose the foul air above the ceiling to cool so as to become heavier than the common atmosphere,—only heavier than that immediately below the same ceiling, or just flowing out of the rents. Neither did I call the foul air "carbonic acid," when implying that it could be separated by vegetation, and (as I must still maintain) by no other available power. Men cannot quite afford to use as much "hydrate of lime" as they do oxygen, even in the palace of Westminster; so I fear that ingenious mode of enabling Sir Charles Barry's fancy to luxuriate *ad libitum* in ceilings, would be too costly.

A word of "J. E. D.'s" chief fallacies, though it is hardly necessary:—1. Chemists do not call water, containing a little prussic acid, "prussic acid," or beer "alcohol," or the metal of a sovereign "copper," in an argument respecting specific gravity,—whatever they may call it at other times. 2. He has poured carbonic acid from one vessel into another, while warm from combustion; but that was combustion under a close covering, without upward drainage. If he had made a hole in the top of his receiver, how many pounds of candles does he think he must have burnt in it, before getting carbonic acid enough collected for his experiment? I expressly said it drained downward when prevented draining upward, and instanced our theatres, where, in the pit, we have the carbonic acid "still warm from combustion" in the gallery lamps. 3. If he can make the "kind of mechanical separation of gases," described by Professor Graham, available as a substitute for self-ventilation, he will do a great public service; and I will admit that our architects may retain their darling ceilings unchanged.

E. L. G.

ADMISSION OF FLUIDS IN PIPES AND DRAINS.

THE following is a practical example of the force required to drive water through small pipes:—

I had a public building in hand which required the water from a 9-inch main water pipe passing this building (that 9-inch main previously about 100 yards came from a larger main, and still farther back, from a larger main still). To raise the water 60 feet the water company was applied to to know if they could supply to that height.

Their waterworks were off, as the crow flies, 2 miles: their main pipes they thought were 2½ miles: the water at the waterworks was raised 110 feet high: the ground at waterworks was ascertained to be 12 feet below the building ground, leaving the rise of water 42 feet out of the 110 feet: they therefore concluded that they could supply at nights and Sundays, when all other supplies were off their mains.

I told the architect that they could not supply,—that in 2½ miles of piping they would lose at least 50 feet of rise by the attraction of the pipes, and when we came to prove it I was found quite right.

From long experience in these matters, I would never lay a drain that was likely at any time to be more than one-third filled.

AN OLD PRACTITIONER.

BRICKMAKERS' DISPUTES.

FOR some time past the County Courts of Marylebone and Brompton have been much occupied in determining the claims of brickmakers upon master brickmakers, and of labourers upon moulders. The claims against the moulders were of the ordinary £ a d. description, but against the master brickmakers they assumed a somewhat novel and important feature to employers and employed, the actions coming under the operation of the Act of 9 Geo. 4, commonly called the "Labourers' and Artificers' Act." So vital to the interests of operatives was the question thought to be, that it appears funds have been supplied to the operative brickmakers from various trade societies in support of the men's cause. One action in the Marylebone County Court ruling the whole, it is unnecessary to enter upon others, or to detail the evidence of either. In the case of George v. Bowler, the defendant was sued for what is termed "back pence." It appears it is a custom in the brick-making trade, and has been from time immemorial, for the masters to keep back, from the earnings of the brickmakers, one penny for every thousand bricks made, and which pence were at the end of the brick-making season handed over to the men. The moulders and other men engaged in the brick-fields gave it as their opinion that these pence were kept back by the masters from a kindly feeling, and formed a sort of provident fund for them to fall back upon when the season prevented the making of bricks, and they severally deposed that until the present time they never knew a master to retain it, nor did they for an instant imagine their "thousands' pence" were kept back as a "fund in terrorum," for security of their good behaviour. This impression and conviction upon the minds of the men, there is no question was sincere, for by the evidence adduced they gave the master brickmakers no little trouble in the brickfields contiguous to the metropolis, by striking for higher wages, absconding themselves from work, and getting drunk at the most busy time of the year, reckoning, no doubt, upon the fall back upon their "pence bank." In the present defendant, however, they found a man not to be trifled with; for in return for their asserted injury to his business, he at the first convenient opportunity discharged them for neglect of work and bad conduct, and to their surprise informed them, that the back pence were his, and not theirs, and that they had better apply to the County Court if they felt aggrieved.

The Judge (J. P. Maude, esq.) said he was satisfied the conduct of the brickmakers had been such as to bring them under the restric-